Integrating
Word, Excel, Access, and PowerPoint

Objectives

► **Understand embedding and linking**
► **Insert a Word outline into a PowerPoint presentation**
► **Embed an Excel chart into a PowerPoint slide**
► **Link an Excel worksheet to a PowerPoint slide**
► **Update a linked Excel worksheet in PowerPoint**
► **Export a PowerPoint presentation to Word**

PowerPoint can be easily integrated with the other Office programs. For example, to help you develop a PowerPoint presentation, you can insert a document from Word, or objects, such as an Excel worksheet, directly into the slides of your presentation. ✎ In this unit Maria Abbott, MediaLoft's general sales manager, creates a company status presentation that will be used at this year's executive meeting. To complete the presentation, Maria gathers some data herself and collects more from other employees at MediaLoft. Because everyone at MediaLoft uses Microsoft Office, Maria knows that all the files are compatible.

Understanding Embedding and Linking

Sometimes the easiest way to add information to a PowerPoint presentation is to insert information or an object created in another Office program. For example, you might have an existing Excel chart that you can insert to complete a presentation. There are two ways to add objects to the slides of your presentation; you can embed them or you can link them. The **source file** is the original file that contains the data or object that you want to paste, such as a chart in an Excel workbook or a table in a Word document. The **source program** is the program used to create the source file. The **destination file** is the file that the data or object is pasted into, and the **destination program** is the program used to create the destination file. ✎ Maria wants to learn more about embedding and linking.

Details

► **Embedding objects**

When you **embed** an object, you are actually copying an object from its source file and pasting it into a destination file. Once embedded, an object becomes a part of the destination file, and the object is stored in the destination file. You can open the source program and manipulate an embedded object as long as you have access to the source program (either installed on your computer or over a network). Because an embedded object's data is stored in the destination file, the destination file's size increases relative to the file size of the embedded object. To embed an object in most Office programs, you use the Object command on the Insert menu, or you can use the Copy command in the source file and the Paste or Paste Special command in the destination file.
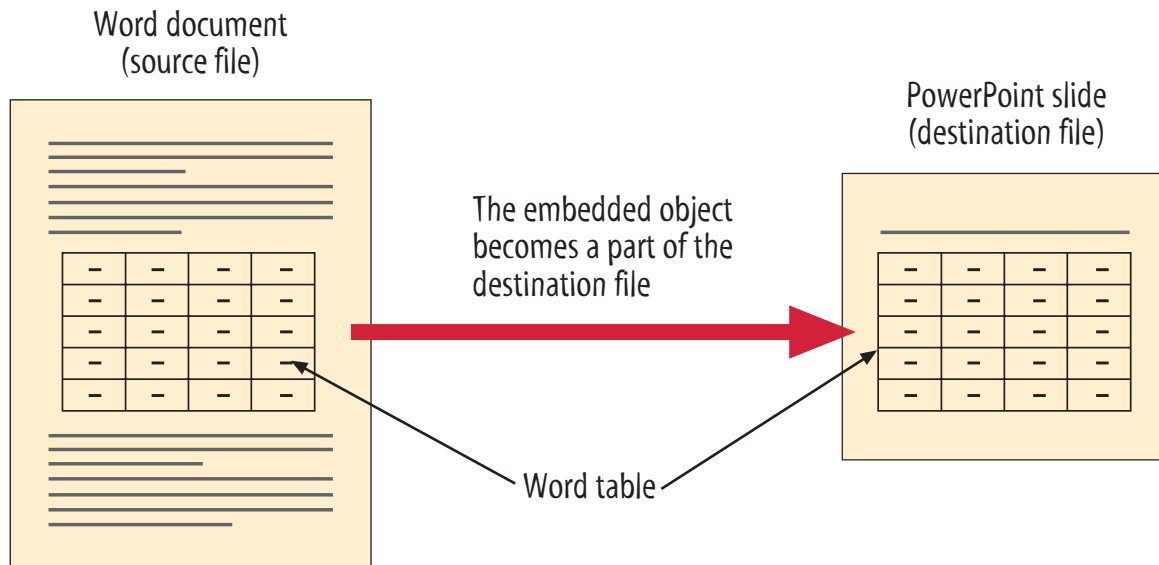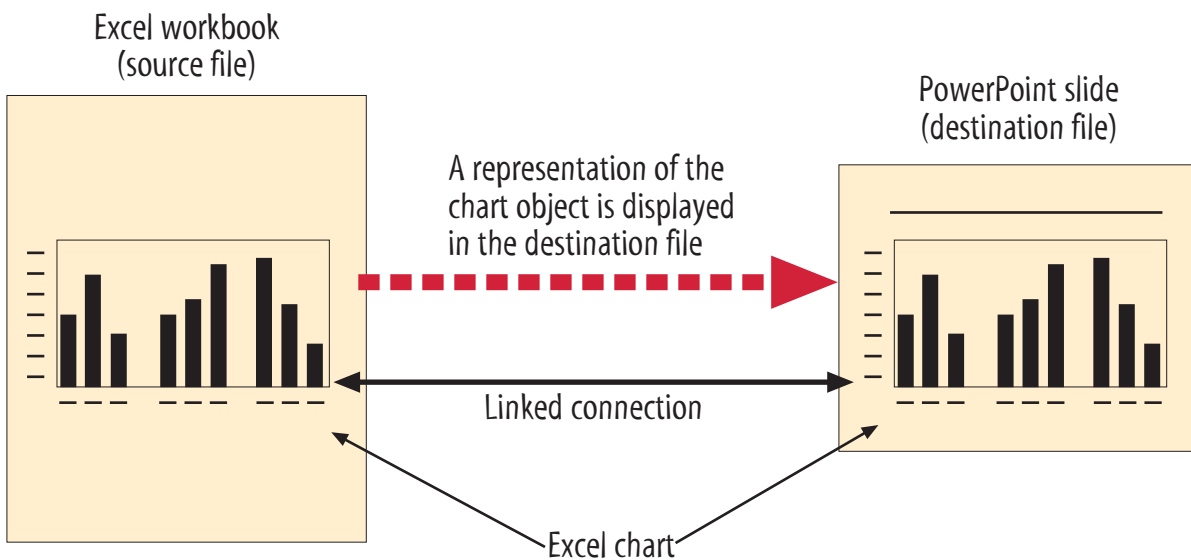
► **Linking objects**

When you **link** an object to a PowerPoint slide, a representation, or picture, of the object is placed on the slide instead of the actual object; this representation of the object is connected, or linked, to the original file. The object is still stored in the source file, unlike an embedded object that is stored directly in a slide. Any changes you make to a linked object's source file are reflected in the linked object. You can open the source file and make changes to the linked object as long as you have access to the source program (either installed on your computer or over a network), and to the source file. To link an object to most Office programs, you use the Object command on the Insert menu, and then click the Link check box in the Insert Object dialog box. You can also copy the object in its source program, click the Paste Special command on the Edit menu in the destination file, and then click the Paste Link option button. The differences between embedding and linking are summarized in Table C-1.

► **Editing embedded and linked objects**

To edit an embedded object, double-click the object. The source program starts, and the menu and toolbars of the source program appear. Changes made to an embedded object in its source program are reflected in the destination file, but these modifications do not affect the original object in the source file because embedded objects have no link to their source files. See Figure C-1.

To edit a linked object, double-click the object to open its source file in its source program, and then make your changes. Close the linked object's source program window when you are finished making changes. The changes made to a linked file are reflected in both the source file and in the linked object in the destination file. See Figure C-2.

FIGURE C-1: Embedding an object

Word document
(source file)

PowerPoint slide
(destination file)

The embedded object becomes a part of the destination file

Word table

FIGURE C-2: Linking an object

Excel workbook
(source file)

PowerPoint slide
(destination file)

A representation of the chart object is displayed in the destination file

Linked connection

Excel chart

TABLE C-1: Embedding vs. Linking

action	situation
Embed	You are the only user of an object, and you want the object to be a part of your presentation.
Embed	You want to access the object in its source program, even if the source file is not available.
Embed	You want to update the object manually while working in PowerPoint.
Link	You always want your object to have the latest information.
Link	The object's source file is shared on a network or where other users have access to the file and can change it.
Link	You want to keep your presentation file size small.

Inserting a Word Outline into a PowerPoint Presentation

Although it is very easy to create an outline in PowerPoint, it is unnecessary if the outline already exists in a Word document. You can easily insert a Word document into PowerPoint to create a presentation outline. The Word document can be formatted with heading styles. A **style** is a named collection of font attributes and paragraph formats; for example, a style named Heading 1 might be a paragraph formatted as 16-point, bold Arial font with extra space above and below the paragraph. When you insert a Word outline formatted with heading styles, the headings in the outline are converted to text levels in PowerPoint. For example, every Word paragraph with the style Heading 1 is converted to a new slide, and every Word paragraph with the style Heading 2 is converted to a subpoint under a slide title. If the Word outline you are inserting doesn't use styles, the outline is converted into slides based on the structure of the document; that is, each new paragraph indicates a new slide, and each new paragraph followed by a tab indicates a subpoint. ✎ Maria inserts a Word outline created by Alice Wegman, MediaLoft's marketing manager, into her presentation.

Steps 1 2 3 4

1. **Start PowerPoint**
   A new blank presentation opens.

2. **Click the Choose presentation hyperlink under New from existing presentation in the task pane**
   The New from Existing Presentation dialog box opens.

3. **Open the file INT C-1.ppt from the location where your Project Files are stored, then save it as Company Status**

4. **Click View on the menu bar, click Task Pane, click Window on the menu bar, then click Arrange All**
   Now your screen matches the figures in this unit. Compare your screen to Figure C-3. The presentation currently contains two slides.

5. **Click anywhere in the text of Slide 2 in the Outline tab**
   When you insert the Word document, it begins with a new slide after the current slide.

6. **Click Insert on the menu bar, then click Slides from Outline**
   The Insert Outline dialog box opens.

7. **Select the file INT C-2.doc from the location where your Project Files are stored, click Insert, then scroll in the Outline tab to see the new slides**
   The Word document is inserted as five new slides. See Figure C-4. You can insert a Word document in the Slide or Outline tab in Normal view. Once an outline is inserted into a presentation, you can edit it as if it had been created in PowerPoint.

8. **Make sure Slide 3 is selected in the Outline tab, click the Slides tab, then click the thumbnails for Slides 4-7 to view each new slide**

FIGURE C-3: Maria's slide presentation

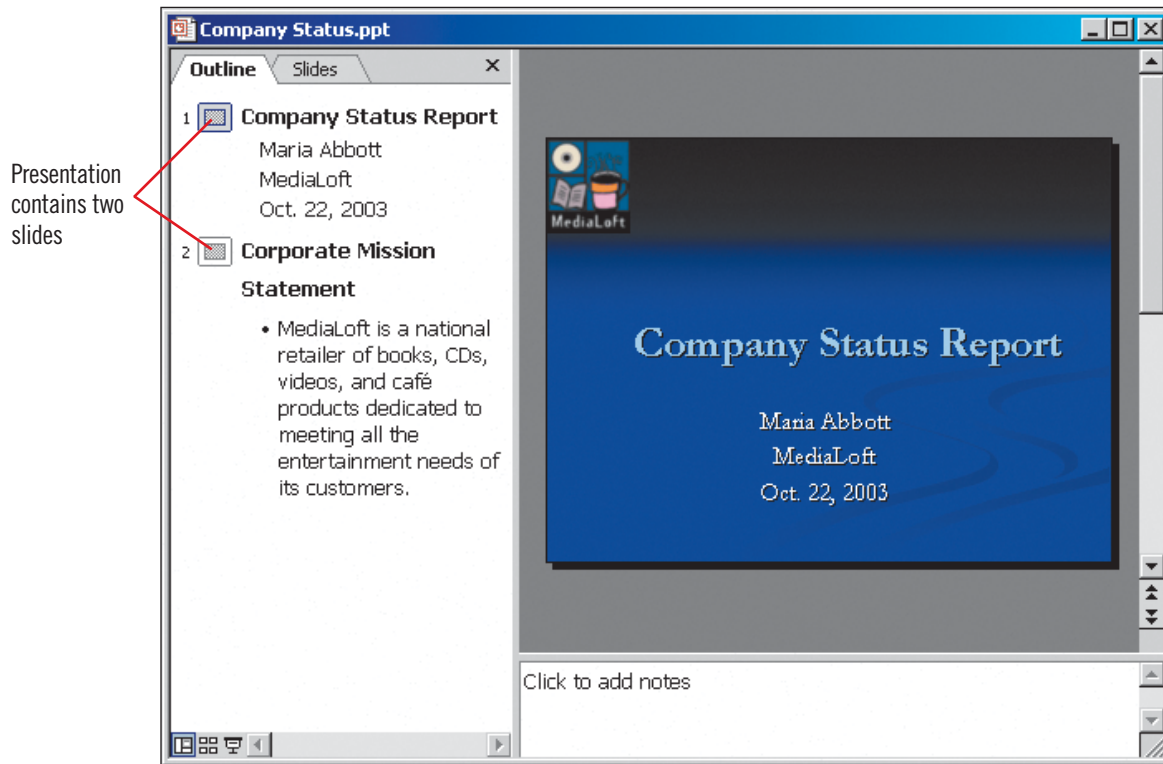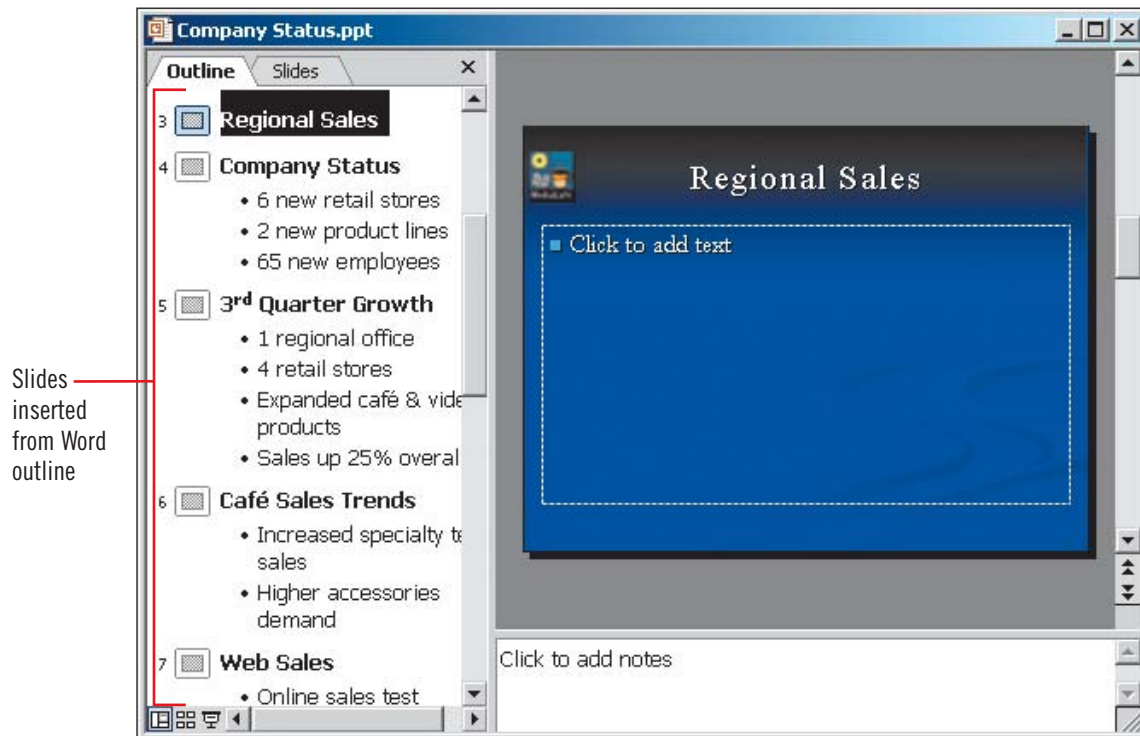Presentation contains two slides

FIGURE C-4: New slides inserted in the Outline tab

Slides inserted from Word outline

Embedding an Excel Chart into a PowerPoint Slide

You can easily embed an Excel chart into a PowerPoint presentation. Because it is embedded, you can double-click a chart to edit it using Excel tools. The original Excel chart object remains unchanged. ✏️ Maria decides to include in her presentation an Excel chart that she received from the Accounting Department. She wants to format the chart after she adds it to her presentation, so she embeds it.

Steps 1 2 3 4

1. Click the **Slide 3 thumbnail** on the Slides tab, click the **Other Task Panes list** ▼ **arrow** on the task pane title bar, click **Slide Layout**, then click the **Title Only layout** under Text Layouts

2. Click **Insert** on the menu bar, then click **Object**
   The Insert Object dialog box opens.

3. Click the **Create from file option button**, click **Browse**, select the file **INT C-3.xls** from the location where your Project Files are stored, click **OK**, then click **OK** in the Insert Object dialog box
   The Excel chart appears on the slide. Compare your screen to Figure C-5.

4. Click the **Fill Color list arrow** 🎨 ▾ on the Drawing toolbar, then click the **light purple** square (labeled Follow Title Text Scheme Color)
   The chart text would be more readable if it were larger.

5. Double-click the **chart object**
   The PowerPoint menu bar and toolbars are replaced with the Excel menu bar and toolbars, and the Excel Chart toolbar appears.

6. Click the **Chart Objects list arrow** [Chart Area ▾] on the Chart toolbar, click **Chart Title**, click the **Format Chart Title button** 📇 on the Chart toolbar, click the **Font tab**, click **28** in the Size list, then click **OK**
   The change in the Excel chart is reflected in the embedded object in PowerPoint. Because this is an embedded object, editing the object does not alter the original Excel file.

7. Double-click the **vertical axis** to open the Format Axis dialog box, click the **Font tab**, click **16** in the Size list, click **OK**, then repeat this for the **horizontal axis**

8. Repeat Step 7 to make the **legend** larger, then resize the legend to display all the text, if necessary

9. Drag the corner selection handles and reposition the worksheet object until it is approximately the same size and in the same position as in Figure C-6

10. Click outside the chart object to exit Excel, then click outside the chart object again to deselect it
    Compare your slide to Figure C-6.
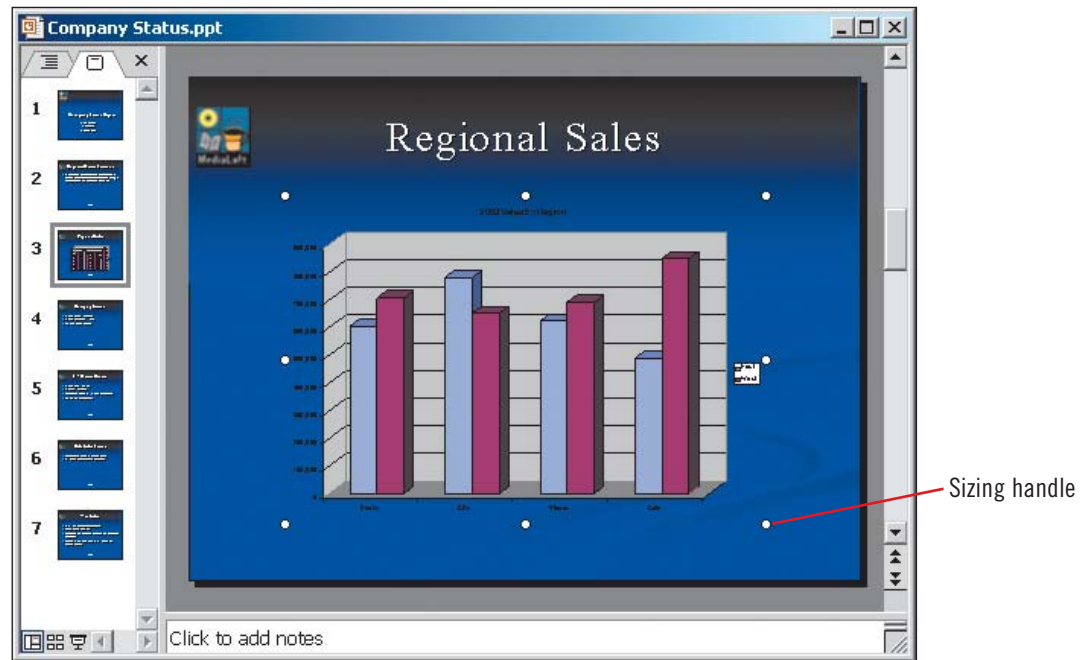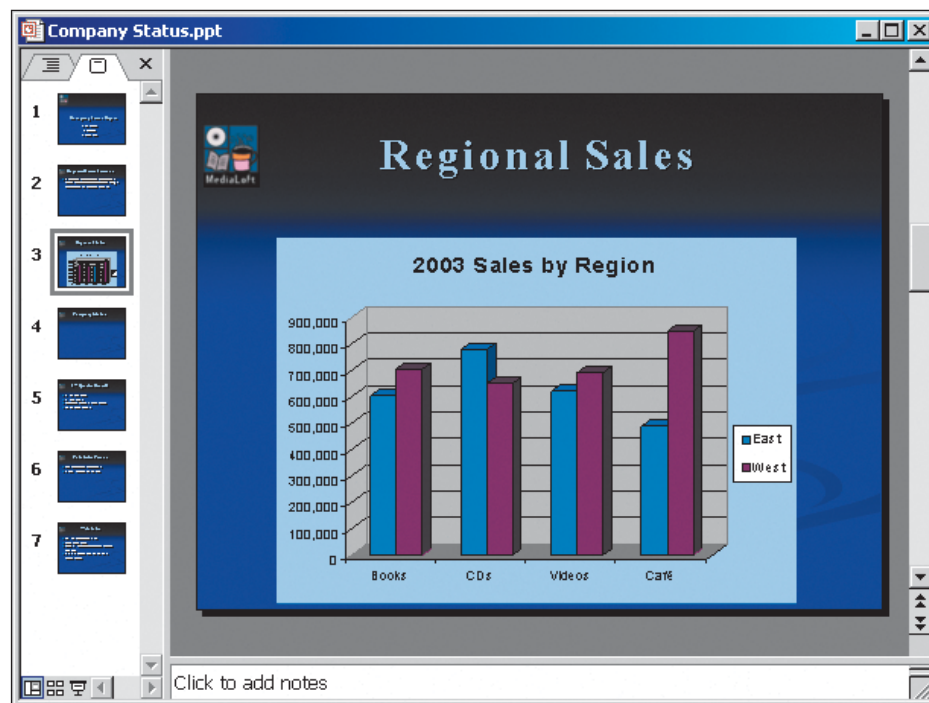
FIGURE C-5: Embedded chart object

Sizing handle

FIGURE C-6: Formatted Excel chart embedded in a slide

CLUES TO USE

Embedding objects using Paste Special

You can also embed an object or selected information from another Office program into PowerPoint by copying and pasting the information. For example, assume that you want to embed a worksheet from an Excel file. Open the Excel file that contains the worksheet, select the worksheet, and copy it to the Clipboard. Open your PowerPoint presentation, click Edit on the menu bar, click Paste Special, then click OK in the Paste Special dialog box.

Linking an Excel Worksheet to a PowerPoint Slide

You can connect objects to your presentation by establishing a link between the file that created the object and the PowerPoint presentation that contains the object. When you modify a linked object, either in its source file or in the destination file, the object changes in both files when you update the link. ✐ Maria needs to insert an Excel worksheet from Jeff Shimada, the director of café operations, into her presentation. Jeff saved the worksheet to MediaLoft's company network of computers. Maria decides to link the worksheet because she knows Jeff will have to update the worksheet before the presentation.

Steps 1234

1. Click the **Slide 6 thumbnail** on the Slides tab, then change the layout to **Title and Text over Content** under Text and Content layouts in the task pane

2. Click **Insert** on the menu bar, then click **Object**
   The Insert Object dialog box opens. You want to create a linked object from an existing file.

3. Click the **Create from file option button**, click **Browse**, select the file **Cafe Profit.xls** from the location where your Project Files are stored, then click **OK**

4. Click the **Link check box** in the Insert Object dialog box to select it
   Compare your screen to Figure C-7.

5. Click **OK**
   The Excel worksheet is linked to the PowerPoint slide. The worksheet would be easier to read if it were larger.

6. Drag the corner selection handles and reposition the worksheet object until it is approximately the same size and in the same position as in Figure C-8
   The chart text is difficult to read against the dark background.

7. Click the **Fill Color list arrow** 🎨▾ on the Drawing toolbar, click the **white color cell** (second from left), then click a blank area of the slide to deselect the object
   Compare your screen to Figure C-8.

8. Save your work

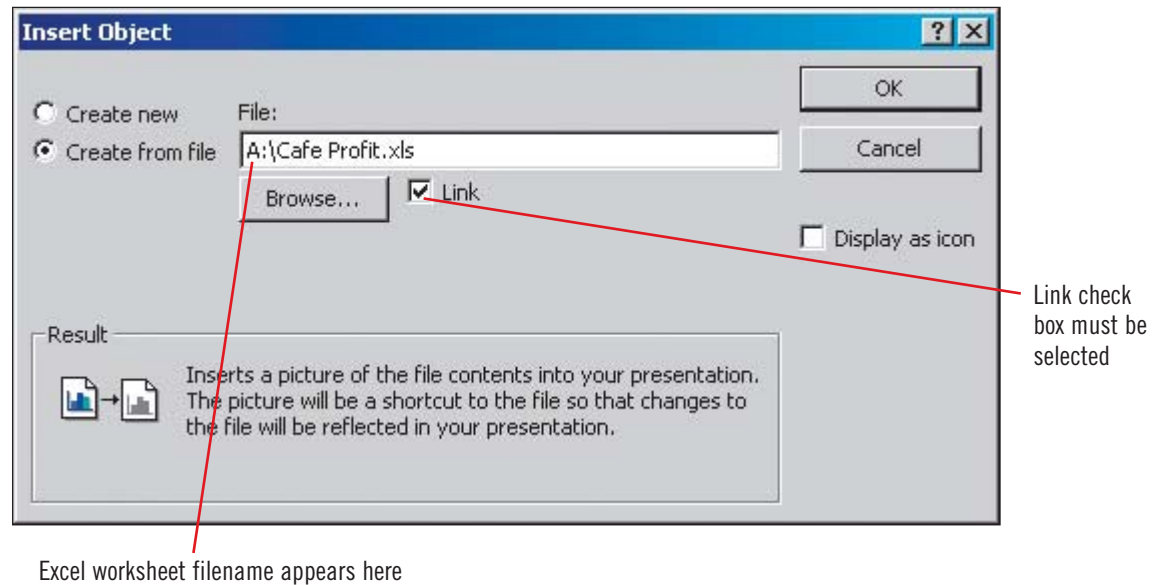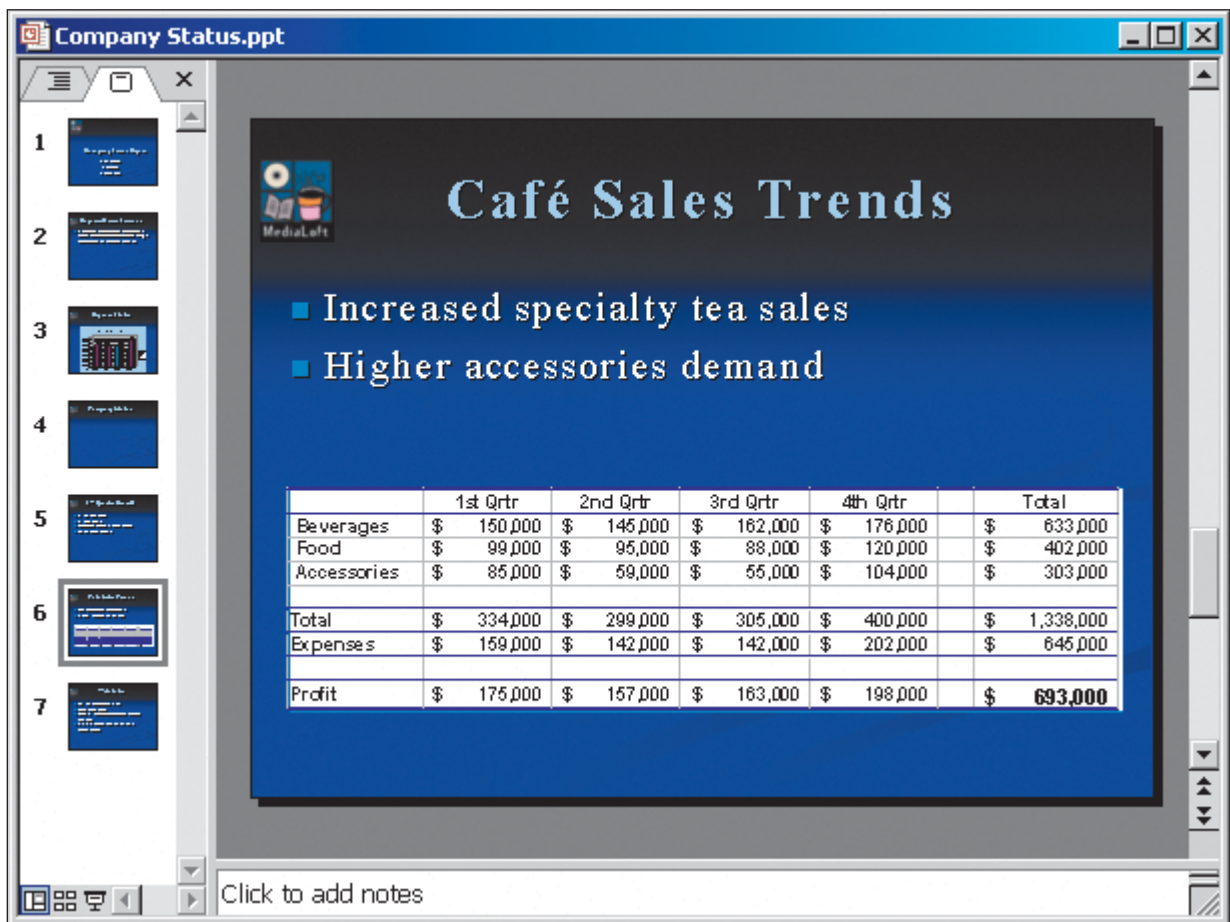**FIGURE C-7:** Insert Object dialog box

Link check box must be selected

Excel worksheet filename appears here

FIGURE C-8: Formatted Excel worksheet linked to a slide

Integration

Updating a Linked Excel Worksheet in PowerPoint

To edit or change the information in a linked object, you must open the object's source file. You can open the object's source file and the program it was created in by double-clicking the linked object in the destination file. If you modify a linked object's source file in the source file program, PowerPoint asks you if you want to automatically update the file in the linked presentation the next time you open the PowerPoint file. 🖋 Maria needs to update the linked worksheet because the wrong number was reported for accessory sales for the third quarter.

Steps 1234

1. Double-click the **worksheet object** on slide 6
   Excel opens in a small window, showing the linked worksheet, and the Excel program button appears on the taskbar.

2. Click the **Maximize button** ▢ in the Excel program window if necessary

3. Click cell **D4**, type **74,000**, then press **[Enter]**
   The number you typed appears in cell D4. Notice that the numbers in cells D6, D9, G4, and G9 all change to reflect the new number in cell D4.

4. Click the **Close button** ✖ in the Excel program window, then click **Yes** to save the changes
   Microsoft Excel closes, and the linked Excel worksheet shows the change you made in Excel. If you opened the file named Cafe Profit.xls in Excel, you would see this same change in the worksheet. Compare your screen to Figure C-9.

5. Click the **Spelling button** ✓ on the Standard toolbar and correct any spelling errors in the presentation

6. Click the **Save button** 💾 on the Standard toolbar to save the changes you made

7. Click the **Slide Sorter View button** ▦ below the Slide tab, click in the **Zoom box** on the Standard toolbar, type **50**, then press **[Enter]**
   Compare your screen to Figure C-10. You changed the zoom percentage so you can see all of the slides in the window.

8. Double-click **Slide 1**, then click the **Slide Show button** 🖥 and view the final presentation

9. Add your name as a footer to all slides and handouts

10. Click **File** on the menu bar, click **Print**, select **Pure Black and White** in the Color/grayscale list, select **Handouts** in the Print what list, select **3 Slides per page**, then click **OK** to print the slides

FIGURE C-9: Data change reflected in linked worksheet

Modified data in Excel worksheet
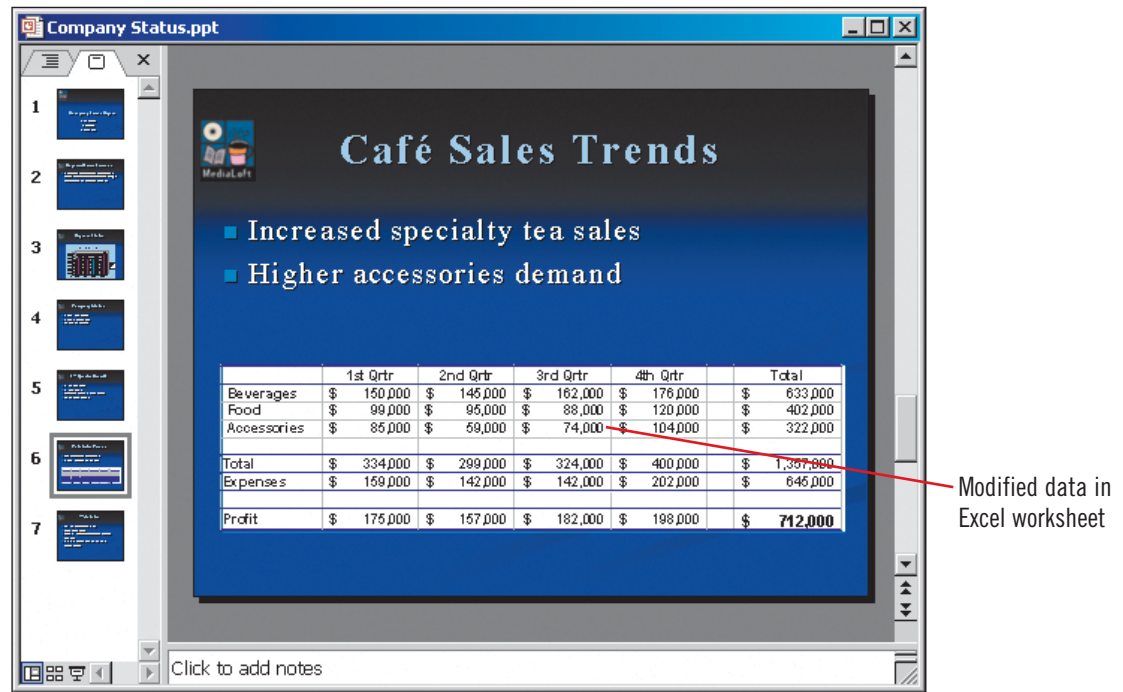
FIGURE C-10: The final presentation in Slide Sorter view

CLUES TO USE
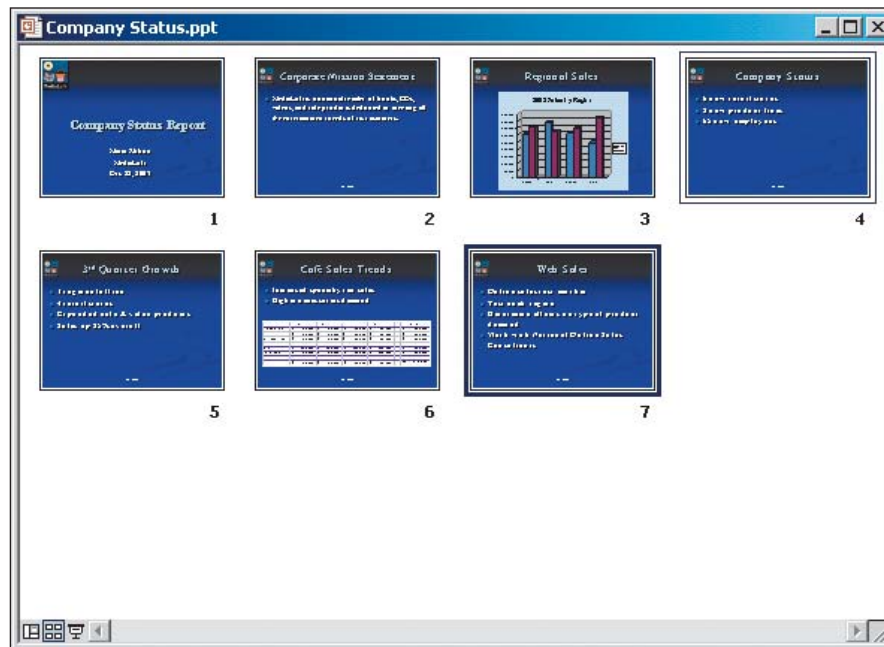
Updating links

If the PowerPoint file is closed when you change the source file, the linked object will still be able to reflect the changes you made in the source file. When you open the file containing the linked object, a dialog box opens reminding you that the file contains links and asking if you want to update the links now. Click OK to update the links, or click Cancel to leave the linked object unchanged. If you choose Cancel, you can still update the link later. Click Edit on the menu bar, then click Links to open the Links dialog box. Click the filename of the link you want to update, then click Update Now.

Exporting a PowerPoint Presentation to Word

You can export a PowerPoint presentation to Word. When you choose the Send To Microsoft Word command on the File menu, Word starts and the outline of the current PowerPoint presentation is exported to a Word document. You can choose one of five layouts for the Word document. Once the PowerPoint outline is in Word, you can save and edit the document. ✐ Maria wants to create handouts with blank lines so the audience can take notes during the presentation.

Steps 1 2 3 4

1. Click **File** on the menu bar, point to **Send To**, then click **Microsoft Word**
   The Send to Microsoft Word dialog box opens, similar to Figure C-11.

2. Click the **Blank lines next to slides option button**
   You want your handouts to automatically reflect any changes you make to the presentation.

3. Click the **Paste link option button** at the bottom of the dialog box

4. Click **OK**
   Microsoft Word opens, and the slides appear in a table in a new document. This process may take a little while to complete. See Figure C-12. The slide numbers are in the first column, the slides are in the second column, and blank lines appear next to the slides in the third column. There are three slides per page.

5. Select the **first column**, then click the **Bold button** ▣ on the Formatting toolbar

6. Press **[Ctrl][End]**, then type your name

7. Save the Word file as **Handouts for Status Meeting** to the drive and location where your Project Files are stored

8. Click the **Print button** 🖨 on the Standard toolbar
   The handouts print.

9. Click the **Close button** on the Word program window, then click the **Close button** on the PowerPoint program window, saving changes if prompted
   The programs close.

FIGURE C-11: Send to Microsoft Word dialog box

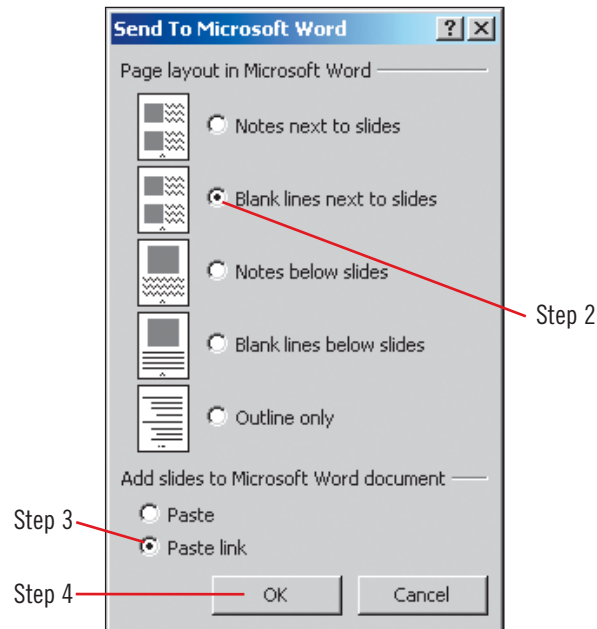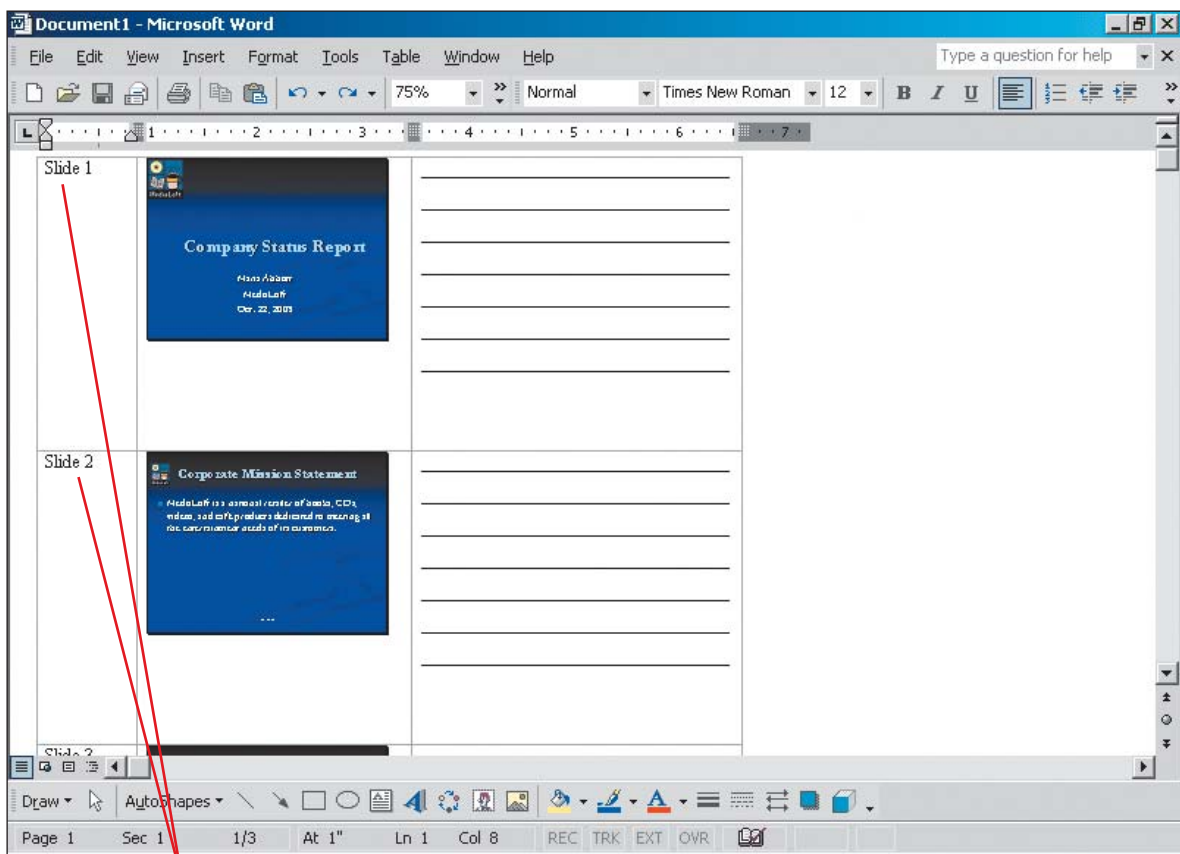Step 2

Step 3

Step 4

FIGURE C-12: Exported PowerPoint presentation in Word

Slide numbers

► Independent Challenge 1

You are responsible for recommending which software packages your company should purchase. You have decided to recommend Microsoft Office. Create a PowerPoint presentation illustrating the advantages of each program in the Microsoft Office suite. Your presentation should also contain slides that show how first-time computer users feel about computers and why Microsoft Office is a good choice for them. Information about first-time computer users is provided in the Word file INT C-4.doc in the location where your Project Files are stored. Think about what you want the presentation to say and what graphics you want to use.

  a. Plan your presentation, determining its purpose and the look that will help communicate your message.

  b. Start PowerPoint, create a presentation, insert your name as the footer on all slides and handouts, then save the presentation as **Office Review** to the location where your Project Files are stored.

  c. Insert the Word document INT C-4.doc into your presentation outline. This file contains information about how first-time computer users feel about computers.

  d. Add slides explaining why Office is a good choice for your company and explaining the advantages of each of the Office suite programs. Your final presentation should contain at least 10 slides.

  e. Create the title slide for your presentation, then save your work.

  f. Add an appropriate design template, graphics, and slide show special effects to the presentation. Check each of the slides created from the outline and make sure they convey the information clearly.

  g. Check the spelling in your presentation.

  h. Run the slide show and evaluate your presentation. Is your message clear? Are the slides visually appealing? Make any changes necessary and save the presentation.

  i. Print the slides and outline of your presentation, then close all open files and programs.

► Independent Challenge 2

To augment the Census Bureau's data on marriage and birthrate statistics, you have been asked to prepare a PowerPoint presentation that will run continuously in the lobby at the local census office. Charts on the data need to be linked to PowerPoint slides because data is occasionally updated. Use the data found in the two worksheets in the Excel file INT C-5.xls in the location where your Project Files are stored. Create a presentation that explains this data.

  a. Start Excel, open the file INT C-5.xls from the location where your Project Files are stored, then save it as **Statistics**.

  b. Create at least four charts using the data in the Marriages worksheet, and create one chart using the data in the Birthrates worksheet.

  c. Examine the data and the charts you created, then create a new Word document containing an outline for your presentation. Summarize the data and explain what the charts show.

  d. Type your name at the top of the document, save it as **Stat Outline** to the location where your Project Files are stored, then print this outline.

  e. Start PowerPoint and open a new presentation. Apply a template of your choice. Insert your name as a footer on all slides and handouts, then save it as **Bureau** to the location where your Project Files are stored.

  f. Create a title slide for the presentation, then insert the file Stat Outline.doc into the presentation.

  g. Link the four charts in the Marriages worksheet to slides in the presentation. Update one of the numbers in the worksheet from within PowerPoint and verify that the number in the presentation is also updated.

  h. Add the chart in the Birthrates worksheet to a slide in the presentation.

  i. Create handouts in Word so the audience can take notes. Link the presentation in case you make changes. Type your name as the last line in the file, then save this file as **Bureau Handouts** to the location where your Project Files are stored.

j. Switch back to the presentation, then add slide show special effects, such as transitions and animation effects, to the slides.

k. Check the spelling in your presentation, then run the final slide show and evaluate your presentation.

l. Save and print the slides of your presentation.

m. Switch back to the Bureau Handouts file in Word, update the link, then save and print the document. (*Hint*: To update the link, use the Links command on the Edit menu.)

n. Close all open files and programs, saving any changes.

► Independent Challenge 3

You have been hired as an associate in the Marketing department at Nomad Ltd, an outdoor sporting gear and adventure travel company. Nomad recently completed a big marketing campaign promoting its bicycle tour packages. Nomad now needs to focus in its other tour packages. Sales of some tour packages, such as bungee jumping, have decreased lately. Concerned about the falling sales, the Nomad board of directors has suggested adding rock climbing and jeep tours to the Nomad tour line to broaden Nomad's customer base. Your job is to develop a marketing presentation that addresses these concerns.

You decide to send a questionnaire to customers who have taken tour packages to ask how they can be improved. You need several charts to show tour trends and the potential sales for the new tours.

a. Start Word and open the file INT C-6.doc from the drive and location where your Project Files are stored. Add your name to the bottom of the letter, then save it as **Cover Letter**. This is the cover letter for the questionnaire.

b. Use the Insert Picture command to add the Nomad logo to the top of the letter. The logo, named Nomad.tif, is in the location where your Project Files are stored. Save your changes, then close the document.

c. Start Access and open the file Customer Data from the location where your Project Files are stored. Create a query that lists all of the information about customers who have taken the bungee tour. Save the query as **Bungee Customers**.

d. Use Mail Merge to merge the cover letter and the Access query you have created. Insert the date and appropriate merge fields in the cover letter. Save the merged file, print the first letter, then close the merged file.

e. Start Excel and open the INT C-7.xls file from the location where your Project Files are stored. Save it as **Tour Type**. This worksheet contains data for road bike, mountain bike, and bungee tour sales. Create two charts on this worksheet: one that compares the sales numbers of the tours and the other that shows the tours as a percentage of all tours. Use drawing tools and color, if appropriate, to point out weak sales. Name this worksheet **Current**.

f. Copy the data from the Current worksheet to a new worksheet. In the new worksheet, add a formula that calculates an increase in the bungee tour sales numbers by 20%, then show this increase in your charts. Use drawing tools and color, if appropriate, to indicate which figures are speculative. Name this worksheet **Bungee Increase**.

g. Copy the increased bungee tour sales data to another new worksheet, then add two more rows for the rock climbing and jeep tours. Assume that their sales equal the sales of the increased bungee tour sales. Create two more charts to show the new tours. Name this worksheet **New Tours**.

h. Add titles to all three charts to identify them. Use drop shadows and other formatting effects to make them more attractive.

i. Start PowerPoint and create a new presentation. Save it as **Tour Evaluation** to the location where your Project Files are stored. This presentation illustrates your marketing ideas to increase sales.

j. Create a title slide, then insert the Word outline INT C-8.doc from the location where your Project Files are stored. Add to the outline your own ideas on how to strengthen bungee tour sales and generate new sales for the new tours. You can suggest additional tours, too.

k. Include any relevant Excel charts on your slides by using the method you feel is best: linking or embedding. Use drawing tools and color, if appropriate, to point out the new tours.

l. Use templates, clip art, animation effects, and any other PowerPoint features you want to create an effective and professional-looking presentation.

m. Insert your name as a footer on all sides and handouts, then print the presentation as handouts (six slides per page).

n. Save and close all files, then close all open programs.

e Independent Challenge 4

You work for Royal Canadian Tours, a travel agency in Calgary, Alberta, Canada. Your agency specializes in railroad tour packages throughout Canada. To prepare for a large convention you need to develop a PowerPoint presentation that illustrates the primary rail tours your company offers. You need to develop a 10-slide presentation that briefly describes your company and at least two rail tour packages your company offers. To find data for your presentation, you need to use the Web to locate certain information.

You'll need to find the following information on the Web:

- General data for a table that compares at least two rail tour packages
- Schedule and destination locations
- Information about services provided on the train, as well as information about attractions along the route

a. Connect to the Internet, then use a search engine to locate Web sites that have information on Canadian rail tours. If your search does not produce any results, you might try the following sites:

> www.cprtours.com
> www.rkymtnrail.com
> www.viarail.ca

Review at least two Web sites that contain information about rail tour packages. Print the Home pages of the Web sites you use to gather data for your presentation.

b. Start Word, add your name to the bottom of the document, then save it as **Rail Tours** to the location where your Project Files are stored. This is the outline for your presentation.

c. Create an outline with the information you've gathered on the Internet. Remember to include enough information for at least 10 slides.

d. Insert the outline into a new PowerPoint presentation and save it as **Royal Tours** to the location where your Project Files are stored.

e. Two slides should include information on schedules and destination cities.

f. Create a new slide, title it **Royal Tours Comparison**, then create a table that compares the features of at least two tour packages.

g. Create a new Excel worksheet and save it as **Royal Tours Data** to the drive and folder where your Project Files are stored. Create a worksheet that identifies the number of people that have toured using the Royal Canadian Tours rail packages over the last three years. Name this worksheet **RCT Tours**. Create your own data, but assume that the number of people have ranged between 10,000 and 50,000, depending on the cost of the tour package. Give a total number of people at the bottom of the worksheet for each year. Link this worksheet to a slide in the presentation.

h. Use templates, clip art, transitions, and any other PowerPoint features you want to create an effective and professional-looking presentation.

i. Insert your name as a footer on all slides and handouts in the presentation, then save and print the presentation as handouts, two slides per page.

j. Save and close all files, then close all open programs.